in one linguistic area and with a vernacular name appropriate to it usually carries this name when it is introduced into an adjacent area. In the second place a cultivar tends to be essentially local. The identical cultivar is not likely to be cultivated in widely separated areas with different vernaculars.

72 Grouping by Economic Characters

Another problem arises in regard to cultivars. The breeding of specialised cultivars is usually done to meet economic needs. It may be to make the plant adapt to different ecological and ontogenetic factors or inherit utility factors such as cooking quality, high yield and long lint. It is for consideration whether the first order array after the species number may not be given to these factors and the actual cultivar number be accommodated in the succeeding array. The isolate numbers of this new array, to be so interpolated should each be a single capital letter. If this can be done, this isolate number can also be attached immediately after utility number or species number.

8 CONVENTION

The above discussion indicates the following convention:
1 Utility cum organ number will always be in arabic numerals;
2 Species number will always be in arabic numerals; and
3 Cultivar number will always begin with Roman Capital digit.

This convention satisfies the cannon of distinctiveness and that of expressiveness to a convenient extent.

81 Abandonment

In the arrays for species, the fourth zone is abandoned altogether. Similarly in the cultivar array, the third zone is abandoned altogether. This may look like running available digits to waste. But this loss is compensated by the advantage to the Cannons of Distinctiveness and Expressiveness. Moreover, difficulty would be caused by the use of alphabetical device both for species and cultivar, because the number of digits representing an isolate is indefinite in alphabetical device. Therefore it would be impossible to know where species number ends and cultivar number begins.

82 Past and Future

In UDC the grouping of agricultural plants is somewhat arbitrary. In CC it is more in conformity with economic use. However, in the current edition - edition 4, 1952 - provision has been made only for certain well-known agricultural plants. This has no doubt proved sufficient for the classification of macro-document. However there may be a micro-document on any single species or cultivar. To group them and to individualise them in a helpful way, the analysis made in this paper has become necessary. Future documentation work will need the pursuit of the subject along these lines. Work is now in progress in expanding the crop schedule - 1P1 - in CC. The present analysis has however, left undisturbed many of the already enumerated plant numbers that are rich in literature. This is a comfort.

DOCUMENTATION IN MANY LANDS

1. TERMINOLOGY AND FUNCTION

The advantage of a carefully determined terminology in the discipline of cataloguing is assumed. A consistently worked out terminology is given. It falls into the 8 groups work, document, author, type of document, documentation list, species of documentation list based on content and structure, documentation personnel, and service and organisation. Incidentally it defines the distinctive functions of documentation lists of the international, national and local levels. The subtle difference between documentation on the one side and bibliography and reference service on the other is brought out. An economical set up for translation service within a country, reproduction service and documentation outposts is also indicated.

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There is still much confusion in the minds of people about documentation problems. Unhelpful and unrealistic weightage is given to the different processes and problems involved in documentation. Time has come to define the terms involved, as closely as possible. For documentation has been practised in several countries, by now, for nearly a decade. There are two ways of arriving at some standard regarding the problems involved in documentation. One way is theoretical. Another is descriptive. In the former way, we should start with a proper terminology. This will incidentally isolate the problems of documentation. Then we can examine the why of documentation. Perhaps, we may also get a clearer picture of its how. In the latter way, we may describe the practices in vogue in several lands. A comparative study of these may indicate the world-trend. It is proposed to pursue the subject in this series of articles, along both of these lines. We shall begin with the first line. Afterwards, we may endeavour to devote one article to each country.

1 WORK
11 Knowledge - unit. - An assumed term.
12 Thought - Knowledge unit.
13 Expressed thought - Thought expressed in language or symbols or in any other mode, and thereby made communicable
14 Work - Expressed thought.
15 Title - Name of work.

2 DOCUMENT
21 Embodied thought - Record of work on paper or other material, fit for physical handling, transport across space and preservation through time.
211 Recording may be done by hand or printing process, or by near-printing process, or by type-writing, or by any kindred process, or by sound-recording machinery, or by any other means.
212 Record also denotes a record reproduced, by photographic or other processes, from a record already made.
213 The material on which record is made may be paper or any substitute for it, or any other material suitable for the recording process used.
22 Document - Embodied thought.

23 Thought-content of a document - the expressed thought embodied in the document.
24 Volume - Several leaves of paper or several units of other material, used for recording a work, forming the whole or a part of a document, fastened together, so as to be opened at any particular place.
25 Contribution - A part of a document, embodying a distinctly recognisable work by itself.

3 AUTHOR
31 Person - An assumed term.
32 Corporate body - A number of persons taken collectively - usually as united, or coming together informally, in a common cause or for a common action such as government, business, deliberation, research, collective expression of opinion or collective statement.
321 A corporate body may be a government, a local body, an institution, a conference, or an organ of any of the above.
33 Author of a work - Either 1 person creating a work, or 2 corporate body owning responsibility for the thought and expression constituting the work.

Cutter's Rules for a dictionary catalogue defines 'author' as follows: "Author, in the narrower sense, is the person who writes the book; in a wider sense, it may be applied to him who is the cause of the book's existence by putting together the writings of several authors (usually called the editor, more properly to be called the collector). The term "writes" is too loose. It may even include ameneusis. The 'wider sense' also makes the term too loose. Prussian instructions does not define the term "Author". It takes it to be an assumed term.

ALA rules for author and title entries defines author as "writer of a work, as distinguished from the translator, editor etc. By extension an artist, composer, photographer, cartographer etc. ... In a broader sense, the maker of a work, or the person or the body immediately responsible for its existence". This is too loose. The term "maker of a book" may
even be misconstrued to include the "printer". The definition adds "a corporate body may be considered the author of publications issued in its name or by its authority". This is too loose. The term "by its authority" may open the flood gates.

Vatican code defines "author" as "the one responsible for a book; this may be one or more individuals or a corporate body". The term "responsible for a book" is too loose. It may also include publisher or sponsor.

Ranganathan's classified catalogue code gives a definition more or less equivalent to the ones given in this paper.

34 Contributor - Author of a contribution forming a part of a work.

35 Joint author - One sharing responsibility with other(s) for the thought and expression contained in a work, the portion for which each is responsible not being specified or separable.

4 TYPE OF DOCUMENT

41 Periodical publication - Document with the following attributes:

1 A volume or a small group of volumes of it is intended to be published or completed normally once in a year or at other regular intervals, though irregularity in interval is not ruled out;

2 Each successive volume or periodical group of volumes is usually distinguished by the year of publication completion, and or by a number belonging to a system of simple or complex ordinal numbers; such a number is called Volume Number;

3 The intention had been to continue the publication of the volumes for ever, though not actually carried out;

4 The intention had been to continue the same title in all the volumes, though not actually carried out; and

5 Either 51 Each volume is made up of distinct and independent contributions not forming a continuous exposition, normally by different contributors and normally the specific subjects and the authors of the contributions in successive volumes being in general different, but all the specific subjects falling within one and the same region of knowledge; or 52 Each volume or each periodical group of volumes embodies more or less similar information mainly relating to its year or other period of coverage.

411 The term 'periodical publication' is also used to denote any volume of a 'periodical publication' as defined in 41.

42 Periodical - Periodical publication with the attribute 51 mentioned in 41

421 The term 'periodical' is also used to denote any volume or any fascicle of a 'periodical' as defined in 42.

43 Serial - Periodical publication with the attribute 52 mentioned in 41.

431 The term 'serial' is also used to denote any volume or any fascicle of a 'serial' as defined in 43.

44 Book - Document other than a periodical publication. That is, it is completed or is intended to be completed in one volume or in a finite number of volumes.

45 Composite book - Book with two or more contributions, each with its own title, distinct and independent, all the contributions not together forming a continuous exposition, and often, though not necessarily by different authors.

451 Ordinary composite book - Composite book provided with a single, generic title to denote all the contributions collectively.

452 Artificial composite book - Composite book which is not ordinary, that is, without a generic title to denote all the contributions collectively.

46 Simple book - Book which is not composite, that is, which embodies continuous exposition by a single author or by two or more joint authors.

47 Multi-volumed book - Book in two or more volumes, giving a continuous exposition of a subject, and for this or for any other reason in the distribution of thought among the volumes, compelling all the volumes to be treated as an inseparable set, that is, as if they take the place of a single volume.

5 DOCUMENTATION LIST

51 Catalogue - List of the documents in a library or a collection forming a portion of it.
52 Macro thought - Thought of some extension, arbitrarily defined as forming the thought content of a book of not less than 50 pages.

521 Micro thought - thought of small extension but of great intension, arbitrarily defined as one forming the thought-content of a book of less than 50 pages, or of an article in a periodical, or of a small part of a book.

53 Macro document - Document embodying macro thought.

531 Micro document - Document embodying micro thought.

54 Bibliography - List of documents listed together for some purpose. In the restricted use of the term, the purpose is to bring to the attention of reader(s) an exhaustive or a selective list of documents relevant to his pursuit of study or enquiry. Originally, it included only macro documents.

55 Documentation list - New name for bibliography with emphasis on the inclusion of micro documents and on the reader served being a specialist engaged in research, business, deliberation or administration.

6 SPECIES BASED ON CONTENT AND STRUCTURE

61 Bare documentation list - A documentation list mentioning the author, the title and either (1) collation and imprint in the case of a macro document or (2) the name of the host document and the exact place of occurrence within it in the case of a micro document.

62 Annotated documentation list - A documentation list in which the scope, the standard and the authoritative nature of a document is indicated in brief terms in all cases found necessary.

63 Documentation list with abstracts - A documentation list in which a brief statement of the essential contribution to knowledge made by the document is given in the form of an "abstract". The abstract may bring out all the foci in the document. Then it is a 'general abstract'. Or, it may have a slant towards a specific interest. Then it is a 'local abstract'. The library of a particular institution will prefer to make a local abstract so as to be helpful to its clientele whose interest it knows.

64 Documentation list of contents - A documentation list giving, in a separate block of its own, the contents of each periodical covered by it.

This is the cheapest form of documentation list. It does not require the continuing help of a classifier or a cataloguer. It is largely a matter of assembling the contents pages in a prescribed sequence and producing copies.

This is the least helpful form of documentation list. This represents a primitive stage.

65 Dictionary documentation list - A documentation list giving in one alphabetical sequence entries of each document both under the names of its author(s) and under its specific subject.

This is more helpful than the "contents" list. This represents a more evolved stage.

66 Documentation list on broad subject basis - A documentation list which groups the documents under a few subjects of large extension and arranges the documents in each group alphabetically by authors' names.

This form is more helpful than the dictionary form. Its helpfulness increases with the increase in the number of subject groups used.

67 Classified documentation list - A documentation list in which the documents are arranged systematically by their specific subjects. This arrangement requires the use of class numbers to represent subjects. This is the most helpful form. It represents the latest stage of evolution reached so far. It should be backed by a schedule of class numbers. It will be even more useful if it is backed by an alphabetical index giving in one sequence class index entries and author index entries. The need for this index will increase with the size of the documentation list.

68 Species Based on service aimed

681 International documentation list - A documentation list of more or less exhaustive international coverage of periodical publications and books.

The production of this list is bound to suffer from time-lag.

682 National documentation list - A documentation list suited to the exact requirements of the investigations, the industries and the administrative and scientific work actually in progress within the nation, and confined to the publications produced or received in the country.

This selective list is produced to get over the time-lag of the exhaustive international documentation list. Since the latter involved time-lag in any case, it is found to be an advantage
to make it of the abstracting variety. The main objective of the national documentation list being the bridging of the time-lag, it is expedient to make it a bare list. But the time and energy needed to make it of the classified variety should be given to make it of maximum possible help to the users.

The national documentation list, in a classified form, will put the specialists on the alert and make them look up the new documents relevant to the work pursued by them, as soon as they are released or received in the country.

683 Local documentation list - Documentation list prepared in an individual library. It is severely selective. It is turned exactly on the work in progress among its clientele.

It is best confined to the resources available within the library.

684 Continuing documentation list - Documentation list produced periodically at any of the three levels, listing the documents appearing during the period covered, and without being selected to suit the requirements of a particular reader or of a specific topic under investigation.

This is of the nature of a general appetiser. It endeavours to keep the clientele informed promptly of all the nascent thought created in their fields of work and fields related to them.

685 Anticipatory documentation list - Documentation list on a specific topic anticipated to engage the attention of the members of the parent body.

Example: In a parliamentary library, on any legislative measure in contemplation. In a University library, on any topic forming the subject of discourse of a special course of lectures. In the United Nations Library, on any topic being brought into the agenda, say, of the Security Council.

686 Documentation list on demand - Documentation list prepared on demand by a particular individual.

The two latter species of lists are best done by local service libraries. For, an intimate knowledge of the needs of the clientele is essential for its preparation. It should certainly cover all the relevant material in the collections locally available. It should also add other items. For this purpose, search in other libraries - non-local libraries - may become necessary. This will not however arise very often.

In some cases, it is best done by the local librarian visiting the other libraries, occasionally even libraries outside the locality.

In some cases, it may lead to national economy if the search is made by a national central agency. But the latter can not get that intimate knowledge of the exact requirements of the reader as can be got by the local librarian in direct and frequent touch with him. Therefore, the topics, for which national central agency can prepare documentation list on demand, will be small in number. In most topics, an economical arrangement will be for the local library to send a copy of the documentation list, prepared by itself, to the national central agency and for the latter to supplement it.

7 DOCUMENTATION PERSONNEL

7 Documentation Work - Work of preparing documentation list of any of the species mentioned in 56 and its subdivisions.

71 In the case of a continuing documentation list, documentation work consists of selecting the documents found in the currently received periodicals and books classifying them, cataloguing them, and preparing the script for multiplication of copies.

72 In the case of an anticipatory documentation list, documentation work consists of selecting the relevant documents retrospectively as well as currently and dealing with them as in 71.

Here, the search for the materials of the past is of the very essence. The period up to which the search should be extended will vary with the topic and with the angle from which the topic is pursued.

73 In the case of a documentation list on demand, documentation work can be more exactly directed to determine the relevant materials sought and can be checked up by contact with the reader at every stage. There may not be need to multiply copies of the list.

75 Documentalist - Person preparing a documentation list of any of the three kinds mentioned in 71, 72 and 73. He should have a sound knowledge of library classification and of cataloguing technique. Documentalist for continuing documentation work need not know the readers personally. But a national documentalist of this kind must have information about the regions of knowledge on which investigation is in progress within the nation. He must develop the necessary means of informing himself of
Documentalist for anticipatory and on-demand documentation work is essentially a reference librarian.

8 SERVICE AND ORGANISATION

81 Documentation service - The act of procuring the document, selected by a reader from out of the documentation list supplied to him. It can be done by a general library assistant. His business will be to pick out the document concerned from the collection within the library and if it is not available there, to locate it in any other library, and get it on inter-library loan if possible. He need not be an adept in the work of classification or cataloguing. It is sufficient if he can understand a class number and use a catalogue. He may be designated Procurement Assistant. In many situations, where the demand can be met from the collection of the local library itself, documentation work and documentation service need not be separated. They will be done together by the reference librarian.

82 Reproduction service - The act of making a copy of a document needed, either by photo-process or by any other process. Reproduction will be necessary when a reader wants to own a copy of the document needed by him. It will also become necessary, if a document is in some other library which can not lend it out. The reproduction may be of a size admitting of being read directly, or it may be in micro-size needing the use of a 'reader'.

821 The personnel for reproduction service need not have competence in library science. He should be only a technician with competence in the mechanical handling and reproduction of a document.

822 Convenience requires that he should work under the general direction of the head of the library.

83 Translation service - The act of translating a document from one language into another preferred one. It may consist of a full translation or of furnishing a summary or abstract of the document, in the preferred language. A trivial possibility is furnishing a translation of the title of a document.

831 The personnel for translation service need not have competence in library science. He should have competence only in the languages handled by him, with special emphasis on the technical terminology current in different subject fields.

832 The demand for translation will not be continuous enough to maintain a permanent translation staff for all the languages - perhaps even for any one language. Economy will indicate two types of organisation of translation service:

1. For each library or each group of libraries to agree upon a panel of translators, who do translation service on contract basis;
2. For a national centre to maintain a small group of translation personnel for editing and co-ordinating the translation work done on contract.

833 Convenience requires that the translation personnel should work under the general directions of the head of the library.

84 National Documentation Centre - Institution in charge of

1. the continuing documentation work of national coverage described in 684;
2. Multiplication of the continuing National documentation lists, and their distribution;
3. Helping of local libraries in the location of documents within the country and promotion of inter-library loan of documents;
4. Location of documents outside the country and the procurement of international library loan of them, or of copies of them for retention in the country;
5. Reproduction of a document by photo-methods or other methods for supply to users;
6. Editing of translations made by the translation panel of the nation, whenever warranted,
7. Maintenance of the national pool of translations, documentation lists, and copies of unpublished documents of value, of making them available for users, and thereby effecting national economy in these services.

841 National Documentation Centre may be an omnibus one covering all subject fields; or there may be a separate National Documentation Centre for different broad regions of knowledge. The former will be conducive to efficiency of service, co-ordination of effort, and national economy.
842 The most helpful location for the omnibus National Documentation Centre is the National Documentation Centre is the National Central Library. For this will have an exhaustive collection of the documents produced within the nation. It will have, perhaps, the biggest collection of foreign documents. It will, further, have the National Union Catalogue of all the important foreign books and periodicals available in the different libraries of the country.

843 In a country whose organisations of library service began more than a century ago - that is, before the libraries were charged with documentation service - the national central library has been tending towards the preservation and exhibition of bibliophilic materials and catering to the needs of antiquarian research. The emphasis of its service was along these lines. It did not generally assume responsibility for documentation service. But the needs of industries and research in fundamental sciences were pressing. Therefore, an independent national documentation centre came to be established, in spite of the avoidable wastage due to duplication of materials, personnel and work.

844 But it is blind capitulation to everything foreign, if a newly developing country initiates such a procedure and makes the National Documentation Centre independent of the National Central Library. Efficiency and economy would make the former an integral but functionally differentiated part of the latter.

845 The capitulation and the national wastage would be even greater if centripetal forces resulting in different national document centres for different regions of knowledge such as medicine, other sciences, humanities and social sciences.

851 The function of a Documentation Outpost will be:
1. To find the demand for documentation work;
2. To decide the topics to be covered by the national documentation list;
3. To promote the wide-spread and efficient use of the national documentation list;
4. To locate and to procure the documents needed for reproduction;
5. If the quantum of work warrants it, to maintain the plant for reproduction of documents.
6. To do liaison work with the members of the Panel of Translators, living within the area of the outpost; and
7. To procure copies of worthwhile unpublished documents for the national pool at the National Documentation Centre.

852 A Documentation Outpost may have to be established in each of the important library and research centres in the country.

In India, for example, one may have to begin with Bombay, Calcutta and Madras. The need for outposts in other places will grow with the growth of research and industrial activity.

853 The most helpful location for Documentation Outpost will be the State Central Library if the locality is the capital of a constituent state. The advantage of this is the same as the advantage of having the National Documentation Centre at the National Central Library.

854 The National Documentation Centre has an important "Laboratory Function". The technique of Documentation Work is an ever-growing one. The discipline of classification and cataloguing needs continuous sharpening. This sharpening work can be made purposive only if it is geared closely to the task of depth-classification involved in documentation work. The difficulties challenging the documentalist and the solutions improvised by him should not be allowed to dissipate away. They should all be garnered and pursued in the domain of the discipline of classification and cataloguing. If this is not done as a concurrent process, the efficiency of documentation work and service will gradually degenerate. The result will not be seen at the moment. But the cumulative result in course of time will be appalling. The National Documentation Centre should bear in mind the need for concurrent research in classification and cataloguing, in fixing the strength of the cadre of documentalists.

86 A similar problem arises also in relation to reproduction and translation of documents.

861 To keep the research attitude alive, to feed it, and to help the nation to radiate to foreign countries and to get irradiated from outside in all techniques connected with documentation, the National Documentation Centre should maintain a learned organ to form the
medium of expression for all the new thought on technique created by it and all the new devices improvised by it.

87 The National Documentation Centre should also take charge of the production of the International Abstracting Periodical in a few subjects. There should be an international agreement regarding the distribution of the subjects among the different nations in the matter of the production of international abstracting periodicals. Whatever subjects come to the share of a nation, its National Documentation Centre should be charged with all the work connected with it.

STANDARD FOR LAY-OUT OF CATALOGUE CODE

As a result of renaissance Asian countries are on the eve of framing catalogue codes in different languages. At the international level also thought is being turned on comparative study of catalogue codes and arrival of the greatest common factor. In this context a standard is suggested for the lay out of a Catalogue Code. The distinctive functions of an International Catalogue Code, Linguistic or National Catalogue Code and a local Catalogue Code of a particular library are brought out.

1 PRESENT STATUS

Library Catalogue is an ancient library tool. But library code of a rigorous kind is of recent origin. It first attained some rigour in stray local codes -- i.e. in individual libraries. Now it is attaining rigour in national forms. An international code is yet to be established. Ccc has, however, some features necessary in an international code.

11 Why All This

There is need for the preliminary settling of principles and style. Any document embodying any recorded socialised though produced in any form on earth is needed for consumption in every other spot. Without the aid of catalogue, documents cannot be located. Unlike classification, catalogue cannot use a purely artificial symbolic international language. It has to be expressed in a language. Of natural languages there will always be many. This linguistic hurdle obstructs international exchange of thought. But the language of the headings in catalogue entries can be made to shed most of its hurdles, though the script, the nouns used and just a handful of the auxiliary words needed are preserved in natural language. This is not yet fully realised. At any rate, it has not yet been fully exploited. By agreeing on normative principles and on the ideal to be reached in regard to the drafting of the rule, it can be exploited. The result will lead us nearly to the best help possible in making socialised document circulate effectively among all its possible readers in spite of the basic words in the heading belonging to an alien language. An additional help of great potency will be the classified form of catalogue using a good scheme of classification. Obviously, none of these can overcome the political barrier obstructing the flow of documents qua physical materials. But to the extent to which political curtains allow their free flow, the various national catalogues would admit of easily being pooled and used together. This will give the best help available in circulation. On this assumption let us work out a lay-out for catalogue code as the basis for further discussion.

2 LAY-OUT

Each catalogue code -- whether international, linguistic, national, local, or bibliophilic, -- should have a similar lay-out. This is the next point to be agreed upon at the Round-Table.

21 Terminology

A code should begin with a chapter on terminology. Terminology of a discipline is dif-